TECHNICAL NOTES

LAKE STATES FOREST EXPERIMENT STATION
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Chemical Frill Girdling in Summer and Fall Gives Best Results in Lower Michigan

Chemical frill girdling is a common method for controlling individual weed trees for forest management purposes. The technique used in the Lake States consists of making a single continuous cut completely around the base of the tree with an axe; to this cut a 1-percent mixture of 2,4,5-T ester in fuel oil (4 pounds acid equivalent per 100 gallons) is then added. In pine release operations, weed trees under 3 inches in diameter and tall brush are usually cut and the stumps sprayed with the same chemical mixture.

The chemical frill girdle treatment not only results in better top kill and less sprouting than regular notch girdling work, but also it is less expensive. A crew of 4 (3 axemen and 1 man to add the chemical to the cut frills) is able to treat approximately 1,000 inches of diameter per hour with about 1.5 gallons of chemical mixture.

Although this method is effective in killing the tops of nearly all trees in the region at any season of the year, the number of sprouts that develop from the hardwoods varies with the season of the year when the treatment is applied.

Results from tests installed 3 years ago in Lower Michigan reveal that only about one-third of the hardwoods sprouted when treated with chemical frill girdles during the summer and fall (July through October). In contrast, about one-half of the hardwoods similarly treated during the winter and spring (December through May) developed sprouts. Regardless of the season of treatment, little to no sprouting resulted when the frill girdle with chemical was placed close to the root collar; this, however, takes more time and is less convenient than making the cut higher up.

Where sprout growth needs to be reduced to a minimum as in releasing small pine from competition with low-quality hardwoods, the chemical frill girdling work should be done during the summer and fall. Hardwood species that are prolific sprouters should be frill-treated close to the root collar.

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